ESF OS™

Embedded Software Framework

- *No Royalties*
- *Micro foot print*
- *ROMable and reentrant*
- *No heap based allocation*
- *Simple intuitive API*
- *Processor independent*
- *Supports flexible threading models*
- *Deterministic behavior*
- *Clear well defined header framework (removes clutter)*

ESF RTOS ® is a simple, powerful, and easily customizable, object-oriented interface to kernel services, such as thread creation and synchronization. The interface is implemented as a thread library for POSIX or any of the Microsoft WIN32 operating systems, or as a stand-alone, compact, true object-oriented, preemptive real-time executive.

In the latter case, it is a "light weight" kernel of threads that share the same address space, where operations, such as context switching and memory allocation, are fast and deterministic.

It supports rapid or automated engineering of compact, high-performance real-time software on both embedded and standard platforms.

Software functions are organized into intuitively and conceptually familiar library hierarchies, so that you can quickly learn the available functions and find the components that you need.

The result is a powerful tool that complements almost any design and development environment and that helps to minimize the effort for application development and to maximize the reuse and cross project leveraging of engineering investments. Multi-threaded applications, including complex I/O and device control software, can be engineered to be portable and independent of a specific platform or operating system.

ESF RTOS® is one component of a suite of software frameworks for the development of software subsystems. Additional pre-integrated ESF OS® modules include TCP/IP, Web Server, E-Mail Protocols, SNMP v1/v2, PPP, SCSI, and RAID.

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ESF Base™ is an OS and platform independent data structures and algorithms common to all other frameworks.

ESF RTOS™ is an elegant, simple, powerful, and easily customizable, object-oriented interface to kernel services, such as thread creation and synchronization.

ESF Device™ is a framework of object-oriented, multi-threaded device drivers having portable interfaces and portable implementation, i.e. CPU independence and explicit separation of hardware dependent and hardware independent code.

ESF Tcp/Ip™ is a flexible, fast, compact, no-shortcuts real-time implementation (e.g. no heap allocation, timeouts, etc.) of the standard TCP/IP protocols.

ESF SNMP™ is a complete implementation of the standard SNMP protocols, including a framework for rapid MIB implementation that uses advanced data structures such as "balanced binary trees" for high performance object retrieval.

ESF Web Server™ is an embedded implementation of an HTTP web server that supports all basic HTML (including HTML forms), a website in ROM, and a CGI method for direct execution of internal C or C++ functions.

ESF SCSI™ is a complete implementation of both Initiator and Target side SCSI protocols.

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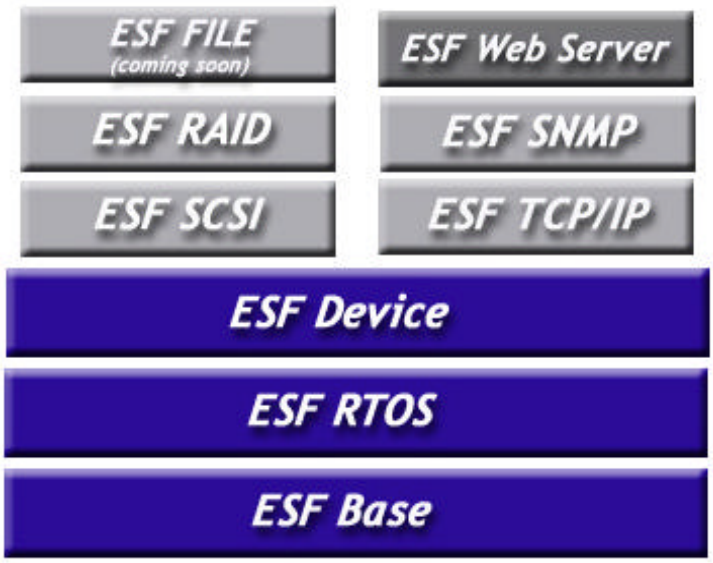
Architectural Box Diagram



CPU Support:

- X86
- PowerPC
- 68XXX
- ARM
- MIPS
- Blackfin
- NECv850
- X-Scale
- SPARC
- DragonBall